CLAIMS

Therefore, having thus described the invention, at least the following is claimed:

1. 1.   A system for managing the allocation and storage of media content instance files
2. in a hard disk of a storage device coupled to a media client device in a subscriber
3. television system, comprising:
4.   a memory for storing logic;
5.   a buffer space in the hard disk for buffering media content instances as buffered
6.   media content instance files; and
7.   a processor configured with the logic to track the size of permanent media content
8.   instance files and the buffered media content instance files to provide an
9.   indication of available free space, such that the indication is independent
10.   of the buffer space.

2. 2.   The system of claim 1, wherein the processor is further configured with the logic
   to provide a user interface, responsive to a user input, wherein the user interface provides
3. the indication of available free space for permanently recording media content instances,
4. wherein the permanently recorded media content instances are configured as the
5. permanently recorded media content instance files.
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1. 3.   The system of claim 2, wherein the permanently recorded media content instance
2. files can be deleted from the storage device.
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1. 4.   The system of claim 2, wherein the user input is implemented with a remote
2. control device.
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1   5.   The system of claim 2, wherein the permanently recorded media content is from
2   the buffer space.

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1   6.   The system of claim 2, wherein the permanently recorded media content is a
2   scheduled recording initially written to non-buffer space.

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1   7.   The system of claim 1, wherein the buffer space, the available free space, and
2   permanently recorded space are located on the hard disk.

1   8.   The system of claim 1, wherein the buffer space and permanently recorded space
2   are allocated from the free space on the hard disk.

1   9.   The system of claim 1, wherein the buffer space and permanently recorded space
2   have physical locations on the hard disk.

1   10.   The system of claim 1, wherein the buffer space and the available free space is
2   measured in units of time.

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1   11.   The system of claim 1, wherein the buffer space and the available free space is
2   measured in units of hard disk space.

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1   12.   The system of claim 1, wherein the processor is further configured with the logic
2   to buffer analog broadcast media content instances, received at a communications
3   interface, as digitally compressed media content instances.

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1   13.   The system of claim 1, wherein the processor is further configured with the logic

2   to buffer an analog signal received at a connector from a consumer electronics device, as

3   a digitally compressed media content instance.

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1   14.   The system of claim 1, wherein the processor is further configured with the logic

2   to buffer digital broadcast media content instances, received at a communications

3   interface, as digitally compressed media content instances.

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1   15.   The system of claim 1, wherein the processor is further configured with the logic

2   to buffer digital media-on-demand media content instances, received at a communications

3   interface from a remote server, as digitally compressed media content instances.

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1   16.   The system of claim 1, wherein the processor is further configured with the logic

2   to buffer digital media content instances, received at a digital communications port from a

3   local network, as digitally compressed media content instances.

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1   17.   The system of claim 1, wherein the processor is further configured with the logic

2   to buffer digital media content instances, received at a digital communications port from a

3   local device, as digitally compressed media content instances.

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1   18.   The system of claim 1, wherein the processor is further configured with the logic

2   to determine the available free space after subtracting buffer space capacity from total

3   disk space.

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19. The system of claim 1, wherein the processor is configured with the logic to reduce the available free space by the amount of the space used for the permanent media content instance files.

20. The system of claim 1, wherein the processor is configured with the logic to increase the available free space by the amount of the space recovered from a deleted permanent media content instance files.

21. The system of claim 1, wherein the indication of the free space available is configured in time of space available for the permanent media content instance files.

22. The system of claim 1, wherein the free space indication is unaffected by writes to and deletions from the buffer space.

23. A system for managing the allocation and storage of media content instance files in a hard disk of a storage device coupled to a media client device in a subscriber television system, comprising:

a memory for storing logic;

a buffer space in the hard disk for continuously buffering media content instances as buffered media content instance files; and

a processor configured with the logic to track the size of permanent media content instance files and the buffered media content instance files, wherein the processor is further configured with the logic to provide a user interface, responsive to a user input, wherein the user interface provides the indication of available free space for permanently recording media content instances, wherein the permanently recorded media content instances are

13   configured as the permanently recorded media content instance files,

14   wherein the permanently recorded media content instance files can be

15   deleted from the storage device, wherein the user input is implemented

16   with a remote control device, wherein the permanently recorded media

17   content is from the buffer space, wherein the permanently recorded media

18   content is a scheduled recording initially written to non-buffer space,

19   wherein the permanently recorded media content is a scheduled recording

20   initially written to non-buffer space, wherein the buffer space, the

21   available free space, and permanently recorded space are located on the

22   hard disk, wherein the buffer space and permanently recorded space are

23   allocated from the free space on the hard disk, wherein the buffer space

24   and permanently recorded space have physical locations on the hard disk,

25   wherein the buffer space and the available free space is measured in units

26   of hard disk space, wherein the processor is further configured with the

27   logic to buffer analog broadcast media content instances, received at a

28   communications interface, as digitally compressed media content

29   instances, wherein the processor is further configured with the logic to

30   buffer an analog signal received at a connector from a consumer

31   electronics device, as a digitally compressed media content instance,

32   wherein the processor is further configured with the logic to buffer digital

33   broadcast media content instances, received at a communications interface,

34   as digitally compressed media content instances, wherein the processor is

35   further configured with the logic to buffer digital media-on-demand media

36   content instances, received at a communications interface from a remote

37   server, as digitally compressed media content instances, wherein the

38   processor is further configured with the logic to buffer digital media

39   content instances, received at a digital communications port from a local

40   network, as digitally compressed media content instances, wherein the

41   processor is further configured with the logic to buffer digital media

42   content instances, received at a digital communications port from a local

43   device, as digitally compressed media content instances, wherein the

44   processor is further configured with the logic to determine the available

45   free space after subtracting buffer space capacity from total disk space,

46   wherein the processor is configured with the logic to reduce the available

47   free space by the amount of the space used for the permanent media

48   content instance files, wherein the processor is configured with the logic to

49   increase the available free space by the amount of the space recovered

50   from a deleted permanent media content instance files, wherein the

51   indication of the free space available is configured in time of space

52   available for the permanent media content instance files, wherein the

53   processor is further configured with the logic to provide the user interface

54   that provides an indication of available free space, such that the indication

55   is unaffected by writes to and deletions from the buffer space.

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1   24.   A method for managing the allocation and storage of media content instance files

2   in a hard disk of a storage device coupled to a media client device in a subscriber

3   television system, comprising the steps of:

4   buffering media content instances into buffer space as buffered media content

5   instance files;

6   tracking the size of permanent media content instance files and buffered media

7   content instance files; and

8   providing an indication of available free space, such that the indication is

9   independent of the buffer space.

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1   25.   The method of claim 24, further comprising the step of providing a user interface,

2   responsive to a user input, wherein the user interface provides the indication of available

3   free space for permanently recording media content instances, wherein the permanently

4   recorded media content instances are configured as the permanently recorded media

5   content instance files.

    26.   The method of claim 25, wherein the permanently recorded media content

2   instance files can be deleted from the storage device.

    27.   The method of claim 25, wherein the user input is implemented with a remote

2   control device.

1   28.   The method of claim 25, wherein the permanently recorded media content is from

2   the buffer space.

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1   29.   The method of claim 25, wherein the permanently recorded media content is a

2   scheduled recording initially written to non-buffer space.

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1   30.   The method of claim 24, wherein the buffer space, the available free space, and

2   permanently recorded space are located on the hard disk.

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1   31.   The method of claim 24, wherein the buffer space and permanently recorded
2   space are allocated from the free space on the hard disk.

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1   32.   The method of claim 24, wherein the buffer space and permanently recorded
2   space have physical locations on the hard disk.

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1   33.   The method of claim 24, wherein the buffer space and the available free space is
2   measured in units of time.

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1   34.   The method of claim 24, wherein the buffer space and the available free space is
2   measured in units of hard disk space.

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1   35.   The method of claim 24, further comprising the step of buffering analog broadcast
2   media content instances, received at a communications interface, as digitally compressed
3   media content instances.

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1   36.   The method of claim 24, further comprising the step of buffering an analog signal
2   received at a connector from a consumer electronics device, as a digitally compressed
3   media content instance.

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1   37.   The method of claim 24, further comprising the step of buffering digital broadcast
2   media content instances, received at a communications interface, as digitally compressed
3   media content instances.

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1   38.   The method of claim 24, further comprising the step of buffering digital media-

2   on-demand media content instances, received at a communications interface from a

3   remote server, as digitally compressed media content instances.

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1   39.   The method of claim 24, further comprising the step of buffering digital media

2   content instances, received at a digital communications port from a local network, as

3   digitally compressed media content instances.

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1   40.   The method of claim 24, further comprising the step of buffering digital media

2   content instances, received at a digital communications port from a local device, as

3   digitally compressed media content instances.

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1   41.   The method of claim 24, further comprising the step of buffering determining the

2   available free space after subtracting buffer space capacity from total disk space.

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1   42.   The method of claim 24, further comprising the step of buffering reducing the

2   available free space by the amount of the space used for the permanent media content

3   instance files.

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1   43.   The method of claim 24, further comprising the step of increasing the available

2   free space by the amount of the space recovered from deleted permanent media content

3   instance files.

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1 44. The method of claim 24, further comprising the step of configuring the indication

2 of the free space available in time of space available for the permanent media content

3 instance files.

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1 45. The method of claim 24, wherein the indication of the free space available is

2 unaffected by writes to and deletions from the buffer space.

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1 46. A method for managing the allocation and storage of media content instance files

in a hard disk of a storage device coupled to a media client device in a subscriber

television system, comprising the steps of:

continuously buffering media content instances as buffered media content instance

files;

tracking the size of permanent media content instance files and the buffered media

content instance files;

providing a user interface, responsive to a user input, wherein the user interface

9 provides the indication of available free space for permanently recording

10 media content instances, wherein the permanently recorded media content

11 instances are configured as the permanently recorded media content

12 instance files, wherein the permanently recorded media content instance

13 files can be deleted from the storage device, wherein the user input is

14 implemented with a remote control device, wherein the permanently

15 recorded media content is from the buffer space, wherein the permanently

16 recorded media content is a scheduled recording initially written to non-

17 buffer space, wherein the permanently recorded media content is a

18 scheduled recording initially written to non-buffer space, wherein the

19 indication is unaffected by writes to and deletions from the buffer space,

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20 wherein the buffer space, the available free space, and permanently

21 recorded space are located on the hard disk, wherein the buffer space and

22 permanently recorded space are allocated from the free space on the hard

23 disk, wherein the buffer space and permanently recorded space have

24 physical locations on the hard disk, wherein the buffer space and the

25 available free space is measured in units of hard disk space;

26 buffering analog broadcast media content instances, received at a communications

27 interface, as digitally compressed media content instances;

28 buffering an analog signal received at a connector from a consumer electronics

29 device, as a digitally compressed media content instance;

30 buffering digital broadcast media content instances, received at a communications

31 interface, as digitally compressed media content instances;

32 buffering digital media-on-demand media content instances, received at a

33 communications interface from a remote server, as digitally compressed

34 media content instances;

35 buffering digital media content instances, received at a digital communications

36 port from a local network, as digitally compressed media content

37 instances;

38 buffering digital media content instances, received at a digital communications

39 port from a local device, as digitally compressed media content instances;

40 determining the available free space after subtracting buffer space capacity from

41 total disk space;

42 reducing the available free space by the amount of the space used for the

43 permanent media content instance files; and

44   increasing the available free space by the amount of the space recovered from a

45   deleted permanent media content instance files, wherein the indication of

46   the free space available is configured in time of space available for the

47   permanent media content instance files.

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